Review Questions-Aynul Kabir

Multiple Choice

**1) A glycosidic bond between the 1-carbon and 4-carbon atoms of two glucose molecules creates...**

A) Lactose + Water

B) Sucrose + Water

C) Maltose + Water

D) None of the above

**2) Which type of carbohydrate though polar cannot dissolve because of its size?**

A)Disaccharides

B)Polysaccharides

C)Monosaccharides

D) All of the above

**3) Which group of 4 amino acids only contains essential amino acids?**

A) Histidine**,** Isoleucine, Tryptophan, Valine

B) Methionine**,** Tryptophan**,** Alanine, Glutamic acid

C) Lysine**.** Threonine**,** Phenylalanine, Testosterone

D) None of the above

**4) In which level of protein structure would changing even a single amino acid, will alter the overall structure to some degree?**

A) Quaternary

B)Tertiary

C)Secondary

D)Primary

**5) What is the difference between pyrimidines and purines?**

A) Pyrimidine bases are single organic rings, purine bases are two-ringed organic structures

B) Purine bases are single organic rings, pyrimidine bases are two-ringed organic structures

C) Purine bases have high nitrogen content whereas pyrimidine bases have low nitrogen content

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**Answers: 1)=C), 2)=B), 3)=A), 4)=D), 5)=A)**

**Short Answer**

**Q: What are the groups of atoms that are found in all amino acids, and which one gives each amino acid it’s unique characteristics?**

A: They all contain an amino group, a carboxyl group, and an R group. The R group is the group that gives gives each amino acid it’s unique characteristics

**Q: Name two types of lipids along with their structure, function, and an example**

A:

|  |  |  |  |
| --- | --- | --- | --- |
| **Type** | **Structure** | **Function** | **Example** |
| **Fatty acid** | **carboxyl group linked to a hydrocarbon chain** | **cellular functions and energy storage** | **stearic acid** |
| **fat** | **three fatty acid chains linked to glycerol** | **energy storage and insulation** | **butter and olive oil** |
| **phospholipid** | **two fatty acid chains and one phosphate group linked to glycerol** | **cell membrane** | **lipid bilayer** |
| **steroid** | **four carbon rings** | **hormonal signaling, cell response to the environment and growth** | **testosterone and cholesterol** |
| **wax** | **long fatty acid chains linked to alcohol or carbon rings** | **water resistance and protection** | **wax coating on leaves, and stems** |